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June 19, 1974

Briefing by
Herman Kahn

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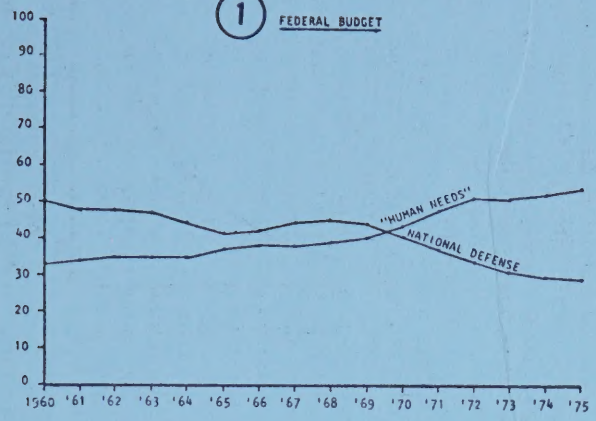
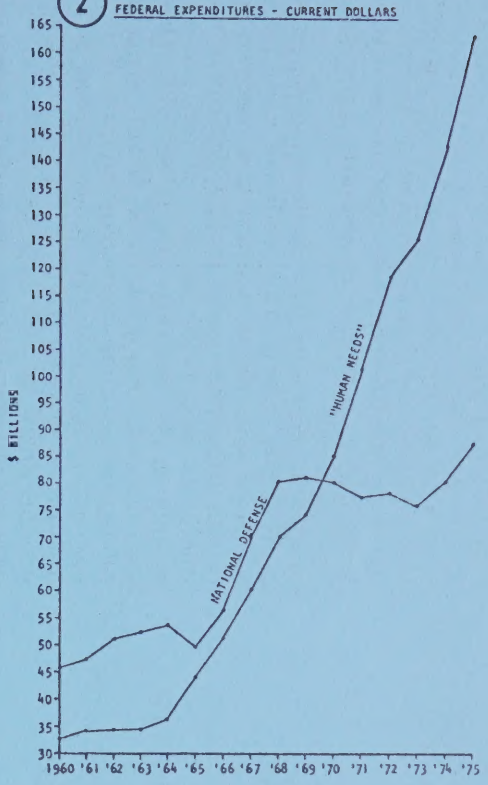
U.S. Fiscal and Monetary Policies

Side B

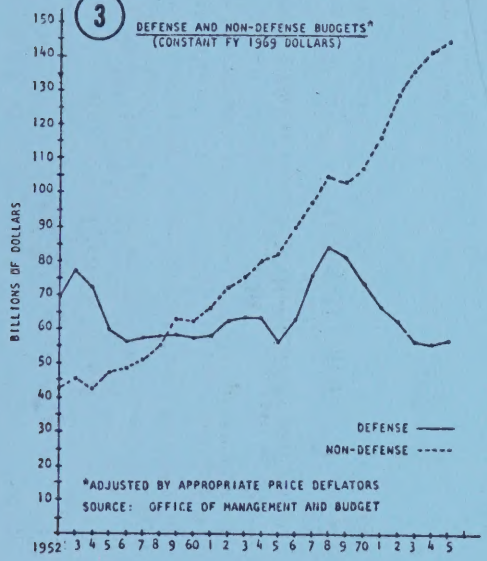
1 FEDERAL BUDGET



2 FEDERAL EXPENDITURES - CURRENT DOLLARS



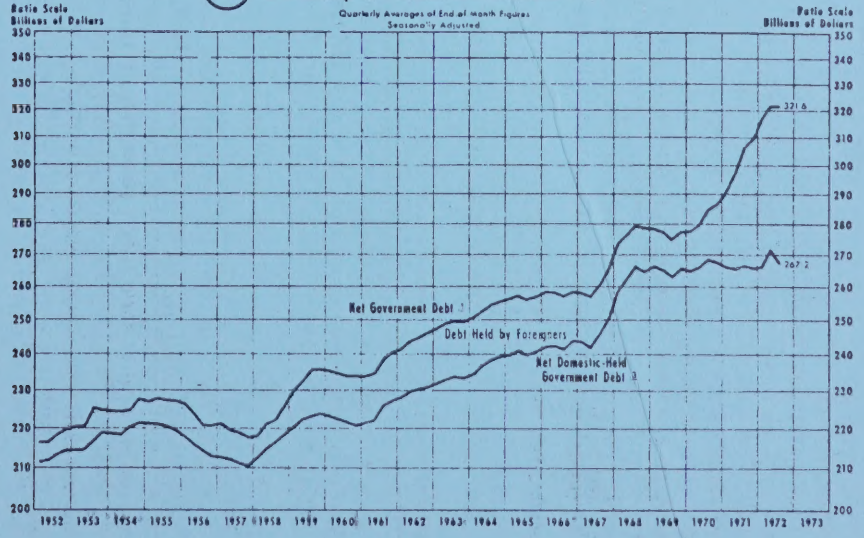
3 DEFENSE AND NON-DEFENSE BUDGETS* (CONSTANT FY 1969 DOLLARS)



*ADJUSTED BY APPROPRIATE PRICE DEFLATORS

SOURCE: OFFICE OF MANAGEMENT AND BUDGET

4 Ownership of Federal Government Debt



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Some Characteristics of Inflation

Side A

1

Type of Price Theory	Postulated Source of Inflation	Implied Solution
1. The Quantity Theory of Money	The Central Bank	Control the rate of money and credit creation by the Fed. and the banking system (incl. change in bank reserve requirements, etc.)
2. Income Theories	Business profits and consumer incomes	Increase taxes to absorb surplus spending power, and adjust the federal budget accordingly
	Government spending	Change federal programs
3. Cost Theories	Non-monetary factors:	
A. Wage-Push	Labor unions	Impose wage (and price) controls
B. Cost-of-Imports	Changes in terms of trade	Erect countervailing world trade cartels--e.g., monopsony to oppose monopoly power, and vice versa
C. Productivity Change		
4. Administered Prices	Government decisions to bring about given price and income allocation results, via subsidy, tax incentives, etc.	Change price-support or income-support programs. Modify the existing tax and subsidy structure. Offer a new schedule of tax incentives
5. Flow-of-Funds Analysis	Conversion of capital assets into current market demand; hoarding	Change the investment environment which governs the flow of savings and investment, by influencing expectations, by enacting new laws and changing the tax structure

2

Factors Leading To:

Cost Push	Demand Pull
1. Overall increase in costs	1. Overall increase in demand
2. Sectoral increase in costs	2. Sectoral increase in demand
3. Reduced investment in productive facilities	3. Overall or sectoral decrease in production
4. Weakened bargaining or price resistance by producers	4. Weakened bargaining or price resistance by purchasers
5. Interest rates (ambiguous effect)	5. Interest rates (ambiguous effect)

3

Some Effects of Inflation

Demand/pull inflation often increases production by transferring income from workers and suppliers to businessmen; this in turn increases government taxes.

Cost/push often has opposite effect.

Both kinds distort the firm's bookkeeping and operations, transfer money from creditors to debtors, from rentiers to producers, from welfare and the poor to better-off groups, and discourage savings and investment in fixed return.

Some effects can be changed, even reversed, if too many people anticipate and prepare for inflation.

4

Some Crucial Issues Affecting the Politics of Inflation

1. Militant anti-inflationary mood--lowered real income of many consumers
2. Militant labor (and welfare beneficiaries?)
3. Weak employers and politicians
4. Likely capital goods boom
5. Import and export of inflation (both cost push and demand pull)
6. Energy problems
7. Food issues
8. Other commodity prices
9. Continuation of problem 1.

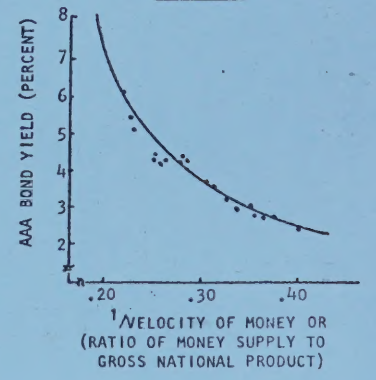
5

Other Reasons for Bad Policies and Discussions

1. Need for some mercantilist rather than solely Adam Smith type analyses
2. Bias against gold of economists from the Atlantic Protestant culture area
3. Limits to growth thinking and attitudes
4. Excessive emphasis on analytic attitudes and against moral or "dogmatic" positions (especially on inflationary or capitalist ideological issues)

6

U.S. Interest Rate vs. Velocity of Money
1950-1970



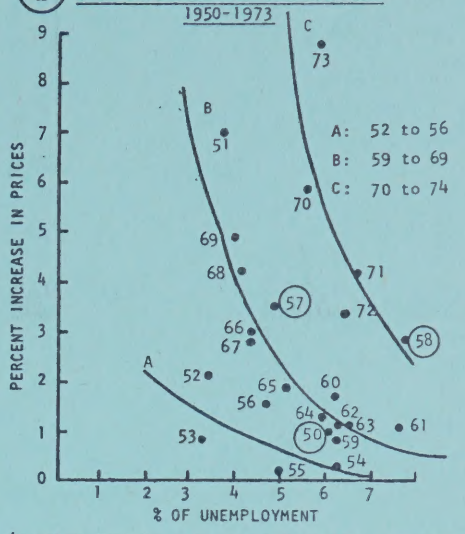
THE FORCES BEHIND POST-WAR INFLATION

Side A

1 SOME POSTWAR EXPANSIONARY FORCES

1. INITIAL HUGE PENT-UP DEMAND
2. HIGH SAVINGS/INVESTMENT RATIO
3. EMPHASIS ON ECONOMIC DEVELOPMENT
4. EXPANSION OF WORLD TRADE AND OF INTERNATIONAL SPECIALIZATION AND INTERACTION
5. INCREASING POPULATION
6. NEW TECHNOLOGIES
7. TRANSNATIONAL CORPORATION BECAME AN ENGINE OF DEVELOPMENT
8. ECONOMIC MIRACLES
9. FOREIGN AID
10. COLD WAR
11. OTHER WELFARE STATE POLICIES
12. FULL EMPLOYMENT POLICIES
13. DEFICITS FELT TO BE TOLERABLE
14. OTHER REASONS FOR RAPID ECONOMIC DEVELOPMENT ALMOST EVERYWHERE AND FOR INFLATIONARY FORCES

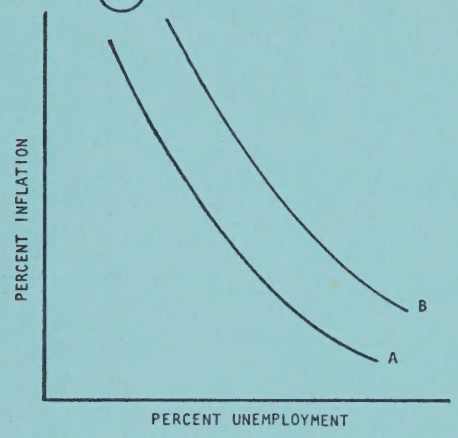
2 U.S. INFLATION AND UNEMPLOYMENT 1950-1973



(CIRCLED NUMBERS ARE, TO SOME DEGREE, ANOMALOUS)

SOURCE: ECONOMIC REPORT OF THE PRESIDENT

3 PHILLIPS CURVE



4 INADEQUATE PRODUCTION FACILITIES

1. "INADEQUATE VISION"
2. LOW RATE (REAL) OF RETURN ON INVESTMENT (E.G. PRICE CONTROLS, LABOR SHORTAGES, LOWERED PRODUCTIVITY OF LABOR, AND OTHER RISING COSTS)
3. LOW SAVINGS RATE AND LOW RATE OF PRODUCTIVE INVESTMENT (INFLATION BOTH LOWERS REAL RATE OF RETURN INDUCES COMPETING NON-PRODUCTIVE INVESTMENTS)
4. HIGH NOMINAL (INFLATION INFLUENCED) INTEREST RATES INCREASE APPARENT OPERATING COSTS--AND REAL RISKS
5. DIVERSION OF CAPITAL TO ANTI-POLLUTION AND ENVIRONMENTAL PROGRAMS
6. DISCOURAGEMENT OF MIO'S (MARGINAL INPUT ORGANIZATIONS)
7. UNDERSTATED (BECAUSE OF INFLATION) DEPRECIATION
8. HIGH TAXES ON (INFLATION INFLATED) EARNINGS AND/OR RETAINED EARNINGS
9. FEAR OF UNRELIABLE INPUT SUPPLIES
10. SOARING CONSTRUCTION COSTS

5 SOME "OTHER POSTWAR" INFLATIONARY FORCES

1. THE UNWILLINGNESS OF SOCIETY AS A WHOLE AND OF LABOR IN PARTICULAR FOR WORKERS TO BEAR THE MAJOR COST OF RECESSIONS--AT LEAST NOT IN QUITE AS EXTREME AND DRAMATIC A FASHION AS HAS BEEN CUSTOMARY IN INDUSTRIAL SOCIETY
2. CREEPING INFLATION NOW OFTEN CONSIDERED ACCEPTABLE
3. THE ONE-SIDED READING OF KEYNES BY ALMOST ALL WESTERN GOVERNMENTS AND THE CORRESPONDING TENDENCY TOWARD INFLATIONARY FISCAL AND MONETARY POLICIES
4. THE CURRENT POLITICAL, SOCIAL AND CULTURAL FORCES THAT ADD TO THE NORMAL ECONOMIC AND BARGAINING ASPECTS OF COST-PUSH PRESSURES BY LABOR UNIONS
5. THE HIGH PROPORTION OF CONSUMPTION TO GNP IN THE UNITED STATES, THE CORRESPONDINGLY LOW PROPORTION OF U.S. GNP SAVED AND INVESTED, THE USE OF BALANCE-OF-PAYMENTS DOLLAR DEFICITS TO FINANCE U.S. FOREIGN ACTIVITIES AND INVESTMENTS--SOME SPECIAL CHARACTERISTICS OF THE "GOLD EXCHANGE" SYSTEM--AND MOST IMPORTANT OF ALL DECREASING CONFIDENCE IN THE DOLLAR AND PAPER CURRENCIES GENERALLY AND CONTINUED EXPECTATIONS OF INFLATION
6. SEIGNIORAGE AND OTHER GOVERNMENTAL PROFITS ENOCURAGE INFLATIONARY POLICIES
7. OTHER SOCIETAL FUNCTIONS FULFILLED BY INFLATION AND SOME OF THE COSTS OF CHOOSING THIS TACTIC TO PERFORM THOSE FUNCTIONS
8. THE EFFECT ON THE AVAILABILITY AND ALLOCATION OF CAPITAL WHEN LONG-TERM INTEREST RATES CONTAIN AN ALMOST PERMANENT HEDGE AGAINST INFLATION
9. THE MOMENTUM ALREADY BUILT UP BY INFLATION
10. THE OBVIOUS INEFFECTIVENESS OF CURRENT GOVERNMENTAL PROGRAMS TO PREVENT INFLATION OR EVEN TO LIMIT IT TO A FEW PERCENT A YEAR

6 NET DEBTOR-CREDITOR STATUS OF MAJOR ECONOMIC GROUPS, 1939-70 (IN BILLIONS OF DOLLARS)

	1939	1949	1960	1970
HOUSEHOLDS*	+ 87	+249	+337	+658
UNINCORPORATED BUSINESSES	+ 3	+ 16	- 21	- 90
NONFINANCIAL CORPORATIONS	- 25	- 17	- 67	-187
FINANCIAL CORPORATIONS	- 3	+ 17	+ 32	- 63
GOVERNMENTS	- 68	-263	-251	-326

*PENSION FUND RESERVES OF $91 BILLION IN 1960 AND $234 BILLION IN 1970 ARE INCLUDED IN MONETARY ASSETS, ALTHOUGH SOME OF THESE (E.G., $64 BILLION IN 1970) WERE INVESTED IN COMMON STOCKS.

SOURCES: R. GOLDSMITH, A STUDY OF SAVINGS IN THE UNITED STATES (PRINCETON, 1955), TABLES W-14-16; FEDERAL RESERVE FLOW-OF-FUNDS ACCOUNTS.

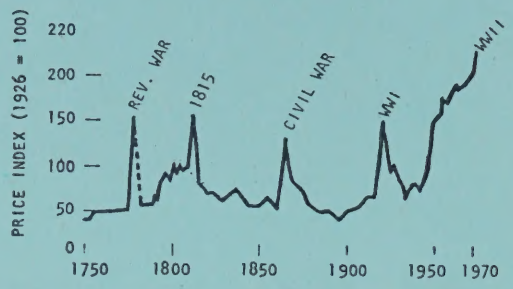
DESCRIPTION OF THE POST-WAR INFLATION

Side B

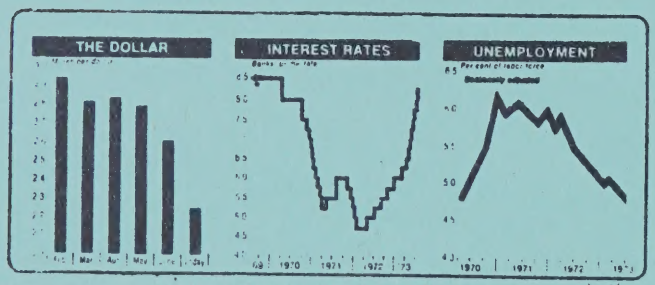
(1) CHANGE IN THE VALUE OF MONEY, ANNUAL INFLATION AND GROWTH RATES, 1950-1970

COUNTRY	1970 VALUE OF MONEY AS % OF 1950 VALUE	ANNUAL RATE OF DEPRECIATION COMPOUNDED (%)	REAL GNP GROWTH (%)
SWITZERLAND	62	2.3	4.2
WEST GERMANY	61	2.4	5.9
UNITED STATES	60	2.5	3.6
CANADA		2.6	4.5
AUSTRALIA	56	2.9	
ITALY	51	3.3	5.5
SWEDEN	48	3.6	4.1
UNITED KINGDOM	48	3.6	2.8
NETHERLANDS		3.7	5.0
AUSTRIA		3.9	4.8
JAPAN	44	4.0	9.6
MEXICO	42	4.2	
FRANCE	41	4.4	4.8
INDIA	40	4.5	
ISRAEL	35	5.1	
SPAIN	35	5.1	
YUGOSLAVIA	20	7.7	
VIETNAM	14	9.4	
CHILE	7	12.5	
BRAZIL	5	14.0	

(2) WHOLESALE PRICE LEVEL IN THE UNITED STATES 1950-1970

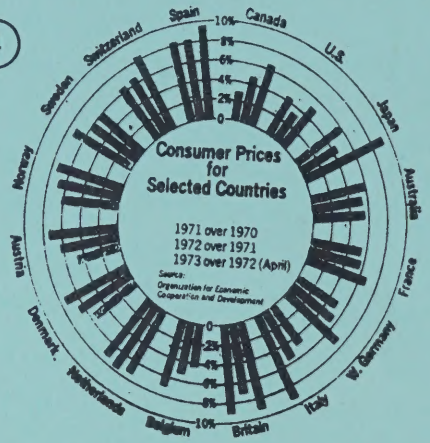


(3) WARNING SIGNALS FOR CONTINUED INFLATION



SOURCE: NEWSWEEK, JULY 16, 1973, P. 63

(4)



(5) ROBERT TRIFFIN

"FOR OVER TWENTY YEARS ONE SIMPLE OBSERVATION HAS GUIDED MY STUDY OF THE MONETARY SYSTEM....

"THIS RELATED TO THE ORIGIN AND ROLE OF THE PERIODIC CRISES WHICH, IN THIS FIELD AS OTHERS, SHAKE OUR INSTITUTIONS. THESE CRISES NORMALLY SPRING FROM OUR DELAY IN ADAPTING THE INSTITUTIONS TO NEW CONDITIONS AND NEW NEEDS. THEY ARE ALSO AN INDISPENSABLE SPUR TO THE NECESSARY REFORMS WHICH GOVERNMENTS, BUREAUCRACIES AND PUBLIC OPINION WILL NOT OTHERWISE ACCEPT.

"THESE CRISES SERVE THE SAME PURPOSE IN THE BODY SOCIAL AS ILLNESS DOES IN THE HUMAN RACE. A MAN DOES NOT WORRY ABOUT HIS LIVER UNTIL IT HURTS HIM. IN THE SAME WAY, WE HAVE NOT BEGUN TO UNDERSTAND, AND CORRECT, THE MALFUNCTIONING OF OUR SUCCESSIVE MONETARY SYSTEMS--FROM THE GOLD STANDARD TO THE GOLD-EXCHANGE STANDARD AND NOW THE PAPER-EXCHANGE STANDARD--UNTIL THEY HURT US."

(6) GEORGE SCHULTZ

"CERTAINLY YOU CANNOT MAKE ANY CASE THAT WHAT HAS HAPPENED TO WAGE INCOME IS RESPONSIBLE FOR INFLATION...FISCAL AND MONETARY FORCES PRODUCED THE INFLATION."

JAMES TOBIN

"THERE'S NO QUESTION THAT EXCESSIVE LABOR COSTS ADD TO INFLATION. BUT IF YOU WANT TO PUT FIRST THINGS FIRST, HAVE A LOOK AT THE ROLE OF PROFITS."

PAUL A SAMUELSON

"CREEPING INFLATION IS THE MALARIA OF THE MODERN MIXED ECONOMY. LIKE MALARIA IT IS UNCOMFORTABLE TO LIVE WITH AND JUST WILL NOT GO AWAY. BUT UNLIKE THE CASE OF MALARIA, THERE SEEMS TO BE NO KNOWN CURE FOR CREEPING INFLATION THAT IS BETTER THAN THE DISEASE."

(7)

"NO CONGRESS OF THE UNITED STATES EVER ASSEMBLED, OR SURVEYING THE STATE OF THE UNION, HAS MET WITH A MORE PLEASING PROSPECT THAN THAT WHICH APPEARS AT THE PRESENT TIME. IN THE DOMESTIC FIELD THERE IS TRANQUILITY AND CONTENTMENT...AND THE HIGHEST RECORD OF PROSPERITY.

PRESIDENT COOLIDGE
DECEMBER 4, 1928

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(1)

INFLATION/INDEXING ANALOGY TO HEROIN/METHADONE

1. MODERATE USE IS NOT EXACTLY HARMFUL OR EVEN "ADDICTING" (I.E., DOES NOT NECESSARILY REQUIRE INCREASED DOSES)

2. HOWEVER, EVEN MODERATE USE CAUSES SUBTLE AND USUALLY OVERLOOKED HARM. FURTHER, IT IS CLEARLY ESCALATION PRONE

3. THEREFORE, THE BIG PROBLEM IS MORE HABITUATION THAN ADDICTION

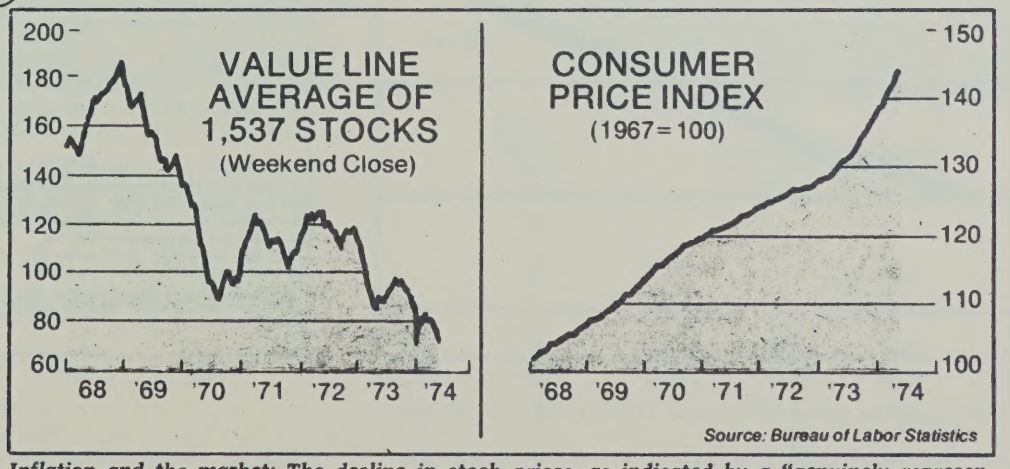
4. BOTH METHADONE AND INDEXING CAN HELP PROVIDE A "SOFT LANDING" AND PREVENT EARLY READDICTION

5. BOTH REQUIRE DISCIPLINE AND CAUTION

6. BOTH CAN BE EASILY ABUSED, CAUSING SERIOUS PROBLEMS

7. BOTH RAISE SERIOUS MORAL, PSYCHOLOGICAL, ETHICAL AND POLITICAL ISSUES

(2)



Inflation and the market: The decline in stock prices, as indicated by a "genuinely representative" index, mirrors the "streaking inflation" of consumer prices in the same period.

INDEXING

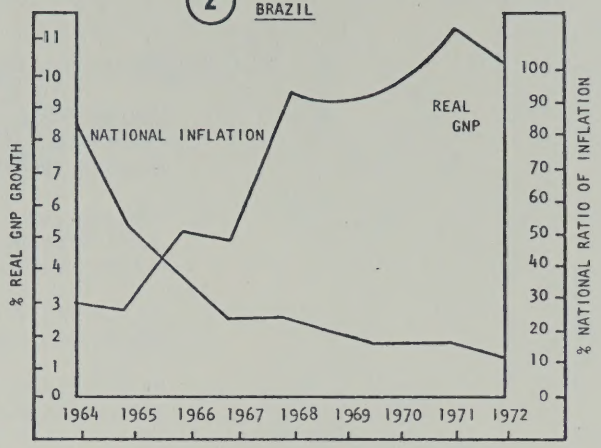
Side A

1 BRAZILIAN MONETARY CORRECTION

1. STRICT CONTROL OF BUDGETARY DEFICIT (0.4% IN 1970 COMPARED TO 5% IN 1963).
2. EXPORT PRICE REGULATION (GOVERNMENT PROFITS IN LIEU OF TAXES).
3. WAGE RESTRAINT--REAL WAGES WERE GOING DOWN FROM 1964-1967; SINCE 1967 A STEADY RISE OF ABOUT 3-4%.
4. "CRAWLING PEG": CRUZEIRO IS REVALUED AT FREQUENT BUT IRREGULAR INTERVALS, ON THE BASIS OF A MONTHLY ASSESSMENT OF INFLATION TRENDS INSIDE THE COUNTRY. TAKES AWAY THE SHOCK OF A MAMMOTH DEVALUATION ONCE A YEAR; REDUCES SPECULATION AGAINST THE CRUZEIRO.
5. MONETARY CORRECTION: MOST THINGS WITH A PAPER VALUE--CAPITAL, EARNINGS, PENSIONS, RENTS, SAVINGS, LOANS, GOVERNMENT BONDS, PRIVATE SECURITIES, FIXED ASSETS, COMMERCIAL CONTRACTS--ARE ADJUSTED TO ACCEPTED PRICE INDICES.
6. MONETARY CORRECTION GAINS ARE TAX-FREE. BRAZILIAN COMPANIES CAN WRITE UP THE VALUE OF PLANT EQUIPMENT AND WORKING CAPITAL EVERY YEAR IN ACCORDANCE WITH THE STANDARD INDEX. THESE PAPER GAINS ARE NOT TAXABLE AS LONG AS THEY ARE CAPITALIZED.

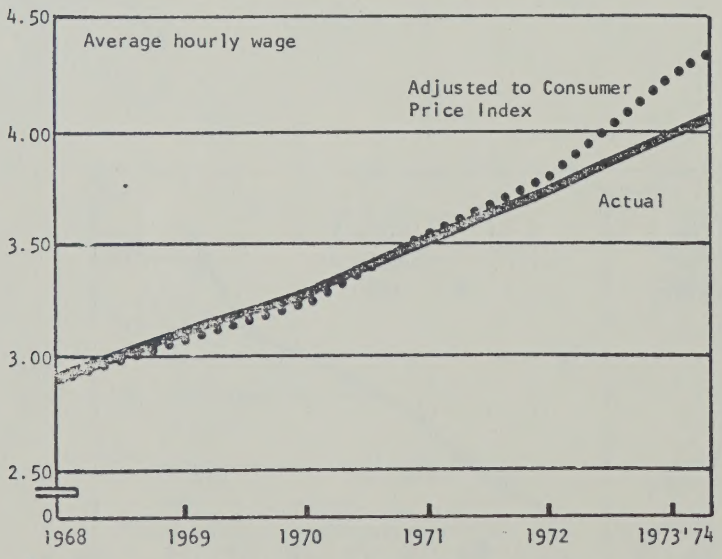
   THIS ALSO MEANS THAT COMPANIES CAN CHARGE REALISTIC DEPRECIATION.

2 BRAZIL



SOURCE: VARGAS FOUNDATION

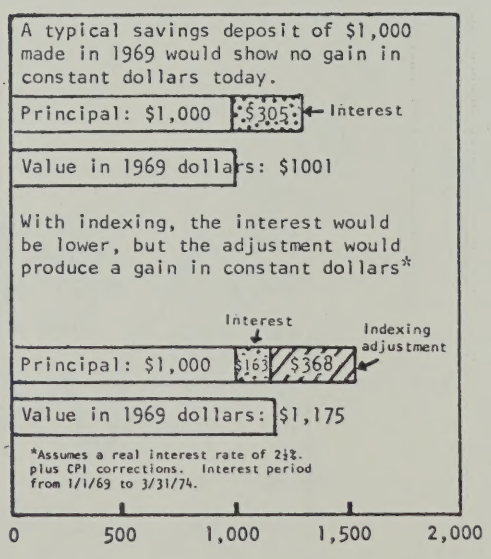
3 WHAT INDEXING MIGHT HAVE DONE TO WAGES



Scale based on yearend figures; 1974 as of March.

Source: Bureau of Labor Statistics; BW est. Indexed wage includes productivity increases.

...AND TO SAVINGS


A typical savings deposit of $1,000 made in 1969 would show no gain in constant dollars today.
Principal: $1,000
$305
Interest
Value in 1969 dollars: $1001
With indexing, the interest would be lower, but the adjustment would produce a gain in constant dollars*
Interest
Indexing adjustment
Principal: $1,000
$163
$368
Value in 1969 dollars: $1,175
*Assumes a real interest rate of 2½%. plus CPI corrections. Interest period from 1/1/69 to 3/31/74.
0 500 1,000 1,500 2,000

Source: Savings Bank Assn. of New York State; BW est.

CURRENT AND FUTURE ENERGY ISSUES AND POLICIES

Side A

POLICIES MAKE A DIFFERENCE

(1) MAJOR U.S. MISTAKES

A. THE PRICE OF NATURAL GAS WAS TOO LOW

1. CAUSED DEPLETION OF GAS RESERVES
2. NATURAL GAS DROVE COAL FROM MARKET
3. R & D FOR ALTERNATIVES INHIBITED AND MISDIRECTED

B. DELAY IN BUILDING THE ALASKA PIPELINE:

1. DISCOURAGED ALASKAN AND PERHAPS CANADIAN DEVELOPMENT
2. LED TO A MISUNDERSTANDING OF SIZE OF U.S. RESERVES
3. DELAYED PRODUCTION PER YEAR OF:
   - 1 TO 2 BILLION BARRELS OF OIL
   - 1 TO 5 TRILLION CUBIC FEET OF GAS

C. SOME ENVIRONMENTAL, SAFETY AND ECOLOGY MEASURES WERE:

1. BADLY TIMED AND FORMULATED
2. INTRODUCED TOO RIGIDLY AND APPLIED TOO RAPIDLY

D. U.S. RESERVE CAPACITY AND FLEXIBILITY ALLOWED TO BECOME DANGEROUSLY TIGHT

(2) MAJOR OECD MISTAKES

A. STORED RESERVES INSUFFICIENT

B. WEAK POLICIES TOWARD OAPEC COUNTRIES

1. TOO GREAT RELIANCE ON OAPEC
2. INSUFFICIENT INDUCEMENTS FOR OAPEC COUNTRIES TO LOCK THEMSELVES INTO STABLE PRODUCTION
3. TOLERANCE OF PALESTINIAN TERRORISM AND ARAB "DISCRETIONARY BEHAVIOR"

C. OECD ALLOWED PRICE OF OIL TO RISE TOO SLOWLY

D. DUBIOUS FOREIGN POLICY ANTECEDENTS

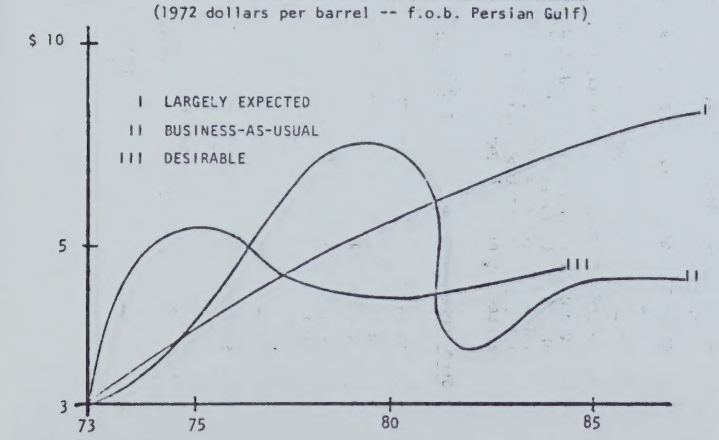
1. INCOMPETENTLY LAUNCHED 1965 SUEZ EXPEDITION; U.S. LEGALISTIC ATTITUDE
2. 1972 BRITISH WITHDRAWAL FROM PERSIAN GULF
3. JAPANESE LOW PROFILE
4. PREMATURE CEASEFIRE IN THE OCTOBER 1973 WAR
5. GENERAL WEAKNESS, DISUNITY AND SELF-SERVING NATIONAL POLICIES

(3) CRISIS OBJECTIVES FOR THE UNITED STATES

1. PUBLIC INFORMATION POLICY:
   - A. GOOD EXPOSITION
   - B. COORDINATION
   - C. INDICATIVE PLANNING (TO INFLUENCE RESULTS)
2. OTHER SHORT-TERM ACTIONS:
   - A. MAKE JANUARY-APRIL ADJUSTMENTS
   - B. INITIATE CRASH PROGRAMS
   - C. TAKE HEDGING ACTIONS
3. IMMEDIATE AND LONG-TERM BALANCE OF PAYMENTS ISSUES:
   - A. IF OPEC COUNTRIES ACTUALLY SELL 10 BILLION BARRELS OF OIL IN 1974, AT ROUGHLY $7.50/BARREL:
     - OPEC RECEIVES $75 BILLION
     - THIS IS $50 BILLION MORE THAN EXPECTED PREVIOUSLY
     - THIS WILL CAUSE SOME BALANCE-OF-PAYMENTS CRISIS IN 1974, AND A LESSER STRAIN IN 1975-76
   - B. LONG-TERM BALANCE-OF-PAYMENTS PROBLEMS WILL RESULT EVEN IF THE PRICE IS SIGNIFICANTLY LOWER
   - C. FOR EVERY EXTRA DOLLAR SAVED ON OIL PRICES IN THE DECADE 1975-1985:
     - JAPAN WOULD SAVE $50 BILLION ON PROGRAMMED IMPORTS OF 50 BILLION BARRELS
     - WESTERN EUROPE WOULD SAVE $100 BILLION (ON IMPORTS OF 100 BILLION BARRELS)
     - U.S. WOULD SAVE $75 BILLION, UNLESS WE MOVED TO ENERGY INDEPENDENCE
   - D. THEREFORE, OECD COUNTRIES SHOULD ACT TO REDUCE FOR 1975-1985:
     - PRICE OF OIL
     - ENORMOUS PLANNED CAPITAL FLOWS TO THE OPEC COUNTRIES
     - DISTURBANCE TO THE INTERNATIONAL MONETARY SYSTEM
   - E. UNLESS OECD COUNTRIES ACT, OTHER RAW-MATERIAL SUPPLYING COUNTRIES WILL OVERESTIMATE THEIR ABILITY TO EXERT MONOPOLY POWER
4. EROSION OF WORLD ORDER: UNLESS SENSIBLE MEDIUM AND LONG-TERM THINGS ARE DONE, THE SUPPLY OF OIL, AND RAW MATERIALS GENERALLY, LIKELY TO CONTINUE TO BE INSECURE AND ERRATIC TO DEVELOPED WORLD.
   - --INCREASING POSSIBILITY OF ANARCHY AND VIOLENCE IN INTERNATIONAL RELATIONS
   - --AN EXCESSIVE BACKLASH WHICH COULD RESULT IN RESTORATION OF A COLONIAL-TYPE RELATIONSHIP BETWEEN DEVELOPED AND UNDERDEVELOPED WORLDS
   - --GREAT DAMAGE TO INTERNATIONAL SYSTEM
5. EROSION OF U.S. AND FRIENDLY ALLIANCES: IMPORTANT TO PREVENT FURTHER BREAKDOWN OF OECD, NATO AND EEC--ALL OF WHICH SEEMS LIKELY UNDER CURRENT PROGRAMS
6. CURRENT GENEVA ARAB-ISRAELI NEGOTIATIONS: NO "MUNICHS" OR MUNICH-PRONE SITUATIONS
7. POSSIBILITY OF ESCALATION: SOME CURRENT PROBLEMS COULD EASILY ESCALATE INTO A DISASTROUS SITUATION IN TERMS OF EITHER SOCIETAL DAMAGE TO MANY COUNTRIES OR VIOLENCE AND DANGEROUS CONFRONTATIONS
8. POSSIBILITY OF A DEPRESSION: SERIOUS POSSIBILITY OF A RELATIVELY DEEP RECESSION (INCLUDING AN ACTUAL DECREASE IN GROSS WORLD PRODUCT) AS OPPOSED TO THE NORMAL ADJUSTMENT (I.E., A CHANGE IN THE INCREASE IN GWP FROM ABOUT 7 OR 8 PERCENT IN 1973 TO 2 OR 3 PERCENT IN 1974); MIGHT EVEN BE A DISASTROUS "DEPRESSION" (DEFINED AS A LARGE, RELATIVELY PERMANENT LOSS OF CONFIDENCE AND/OR FAITH IN FUTURE PROSPECTS AMONG BUSINESSMEN AND OTHERS ALMOST EVERYWHERE)

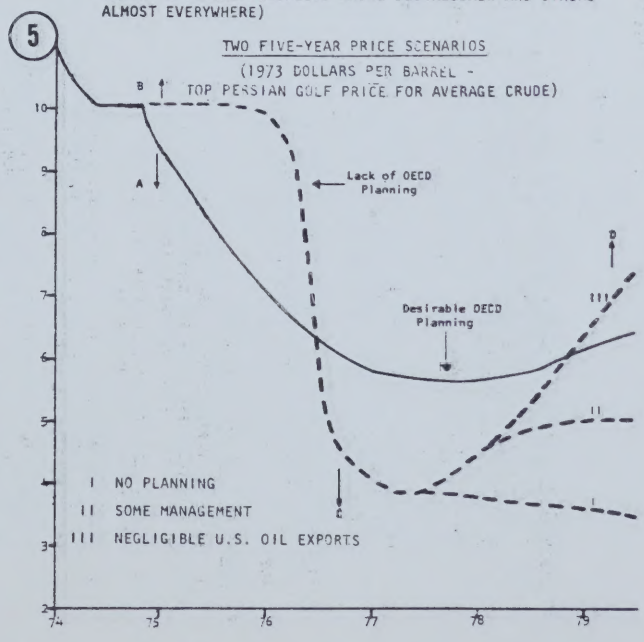
(4) HUDSON'S THREE (1972) PRICE SCENARIOS

(1972 dollars per barrel -- f.o.b. Persian Gulf)



(5) TWO FIVE-YEAR PRICE SCENARIOS

(1973 DOLLARS PER BARREL - TOP PERSIAN GULF PRICE FOR AVERAGE CRUDE)



CURRENT AND FUTURE ENERGY ISSUES AND POLICIES

(1) POSSIBLE OECD SCENARIOS

A. PARANOIAC I: BUSINESS-AS-USUAL; MIDDLE EAST MAINTAINS $7 PRICE

1. MIDDLE EAST OIL DISAPPEARS IN 1976 - OIL STABILIZES AT $7-$8/BBL. (MIDDLE EAST LIVES ON ITS SAVINGS)
2. MIDDLE EAST COMES BACK ONTO THE MARKET WITH A RUSH--OIL GOES TO $2/BBL. OR LESS. (MIDDLE EAST SUPPLEMENTS ITS INCOME WITH ITS SAVINGS)
3. PRIVATE VENTURES, DEVELOPED FOR THE $7-$8 PRICE, ARE DESTROYED. (FEW COUNTRIES ARE WILLING TO USE SUCH HIGH-PRICED OIL, WHEN COMPETITORS ARE USING LOW-PRICED ENERGY)

PARANOIAC II: BUSINESS-AS-USUAL AND PRICE BREAK

SAME AS A. ABOVE, BUT THE MIDDLE EAST BREAKS PRICES IN 1974

B. NIGHTMARE: NO OECD COOPERATION

1. 1974-75, AVERAGE CRUDE IS $8-$9 CIF U.S. (MANY BELIEVE LONG-TERM PRICE FOR SYNCRUDE OR KEROGEN WILL BE ABOVE $10. HUGE INVESTMENTS MADE IN LIQUIFICATION)
2. IN 1974, EUROPEANS AND JAPANESE SIGN LONG-TERM $8-$10 CIF CONTRACTS WITH MANY STATES
3. $7 FOB CONTRACT OIL IN PERSIAN GULF SUPPLIES THIS ENORMOUS INCOME. HUGE SURPLUSES HELD BY OPEC OFF THE MARKET OR SOLD SURREPTITIOUSLY
4. U.S. "THREATENS" TO "DUMP" OIL AT $5-$6 IN 1977 (MOST LIKELY IN FORM OF LONG-TERM CONTRACTS) (WHEN OFFSHORE AND ALASKA COME IN AND SYNTHETICS WILL BE PRODUCED IN A YEAR OR TWO LATER--ALSO PLANS TO SUBSIDIZE SYNTHETICS)
5. OTHER EVEN GREATER SURPLUSES AND PRESSURES ON WORLD PRICE
6. COLLAPSE OF PRICES ALMOST CERTAIN IN 1976 OR 1977
7. COLLAPSE OF PRICES MAY BE CATASTROPHIC
8. EVENTUALLY MIDDLE EAST RECAPTURES WORLD MARKET. RETURNS PRICE TO $7 FOB. THIS TIME POTENTIAL COMPETITION IS VERY SLOW TO CHALLENGE MIDDLE EAST AGAIN (UNLESS OF COURSE SOME FORM OF PROTECTED MARKET AS IN SCENARIO C OR D IS WORKED OUT)

C. OECD COOPERATION (PRIVATE DEVELOPMENT OF LIQUIFICATION) LIKELY 1975/76 PRICES

1. $7 to $8 CIF IN OECD AREA FOR AVERAGE CRUDE
2. IN PRINCIPLE $8-$9 IN OECD AREA FOR AVERAGE "SYNCRUDE" AT MINE
3. $1-$2 FOR TRANSPORTATION AND OTHER COSTS TO GO FROM PERSIAN GULF TO OECD
4. $1-$2 "TARIFF" FROM "PERSIAN GULF" TO OECD--ALSO QUOTAS
5. ABOUT $4 FOB IN PERSIAN GULF
6. SLOW REDUCTION OF PERSIAN GULF PRICE OCCURS IN 1974, 1975 AND 1976 FROM $9 TO $4
7. WORLD DEMAND = WORLD SUPPLY
   1973 20
   1974 20 (INCLUDING "HOARDING")
   1975 20.5
   1976 21
8. ABOUT 2 OR 3 BILLION BARRELS OF SUPPRESSED PRODUCTION IN MIDDLE EAST IN 1975/1976
9. POSSIBLE "COLLAPSE" OF PERSIAN GULF PRICES IN 1975/1976; THEREFORE POSSIBLE INCREASE IN "TARIFF"
10. NO RECAPTURE OF WORLD MARKET BY MIDDLE EAST

D. OECD COOPERATION (GOVERNMENT DEVELOPMENT OF LIQUIFICATION) LIKELY 1975/76 PRICES

1. ABOUT $6 CIF IN OECD AREA FOR AVERAGE CRUDE
2. IN PRINCIPLE ABOUT $7 IN OECD AREA FOR AVERAGE "SYNCRUDE" AT MINE
3. $1-$2 FOR TRANSPORTATION AND OTHER COSTS TO GO FROM PERSIAN GULF TO OECD
4. $1-$2 "TARIFF" FROM PERSIAN GULF TO OECD
5. ABOUT $3 FOB IN PERSIAN GULF
6. MEDIUM RATE OF REDUCTION OF PRICE IN PERSIAN GULF OCCURS IN 1974 AND 1975. SMALLER PROBABILITY OF COLLAPSE IN PRICE
7. WORLD DEMAND = WORLD SUPPLY
   1973 20
   1974 19
   1975 21
   1976 22
8. ABOUT 2 OR 3 BILLION BARRELS OF SUPPRESSED PRODUCTION IN MIDDLE EAST IN 1975/1976
9. POSSIBLE "COLLAPSE" OF PERSIAN GULF PRICES IN 1975/1976; THEREFORE POSSIBLE INCREASE IN "TARIFF"
10. NO RECAPTURE OF WORLD MARKET BY MIDDLE EAST

E. NO OECD COOPERATION - NO NIGHT-MARE

1. IT IS SOON UNDERSTOOD THAT OFFSHORE OIL AND ALASKA OIL WILL BE SUFFICIENT TO MAKE UP MIDDLE EAST DEFICITS OF MANY BILLIONS OF BARRELS IF MIDDLE EAST KEEPS PRICE AT $7 FOB--AS A RESULT IT GRADUALLY REDUCES IT TO $4 FOB, THUS DISCOURAGING ALL OIL THAT COSTS MORE THAN $6 CIF AND ALSO ENCOURAGING A GROWING DEMAND FOR OIL
2. OIL "STABILIZES" AT $3-$5 FOB IN PERSIAN GULF, $5-$7 CIF IN OECD. THERE IS LITTLE OR NO INTEREST (WITHOUT GOVERNMENT INTERVENTION) IN THE PRODUCTION OF MOST SYNTHETIC CRUDES AND THERE IS NO OVERWHELMING MOVEMENT TO COAL--THOUGH COAL PRODUCTION GROWS SOMEWHAT MORE RAPIDLY THAN OIL
3. THERE IS NO POSITIVE STABILIZATION OF PRICE AND OPEC (AND EVEN OAPEC) HAS IT IN THEIR POWER TO PRECIPITATE ANOTHER CRISIS AT ANY TIME (BUT NOT AS EASILY AND AS EFFECTIVELY UNLESS THEY MAKE MUCH GREATER CUTS)
4. ALSO THERE IS MUCH GREATER FLEXIBILITY IN OECD COUNTRIES IN RESPONDING TO SUCH A CRISIS, EVEN IF CUTBACKS ARE QUITE SEVERE
5. ALL THE ABOVE IS FACILITATED BY PERSUASIVE U.S. ANALYSIS AND INDICATIVE PLANNING. COAL PRODUCTION IS FACILITATED BY SUBSIDY AND OTHER GOVERNMENTAL ACTIONS BY MANY COUNTRIES BUT PARTICULARLY U.S. AND JAPAN

(2) TWELVE POSSIBILITIES INVOLVING MOSTLY U.S./CANADA* ACTIONS WHICH, IF IMPLEMENTED, COULD MAKE BIG CHANGES IN WORLDWIDE SUPPLY DEMAND SITUATION

(BILLIONS OF BARRELS OF OIL EQUIVALENT PER YEAR)

SUGGESTED MEASURE	PROBABLE IMPACT WITH: WARTIME SCHEDULE		CRISIS SCHEDU
1. REDUCTION OF CONSUMPTION	1 - 2	(74)	1 - 2
2. BURN COAL INSTEAD OF OIL OR GAS (AND THEN GAS INSTEAD OF OIL)	.7 - 1.5	(74/75)**	2 - 4
3. LOW BTU GAS FROM COAL	.3 - 1	(74/75)	1 - 2
4. OFF-SHORE U.S.	.3 - 1	(76)	1 - 3
5. NORTH SEA	.3 - 1	(76/77)	1 - 2
6. OTHER OFFSHORE	.3 - 1	(76/77)	1 - 3
7. ALASKA PIPELINE	.7 - 1.3	(76/77)	2 - 3
8. CANADIAN OIL SANDS	.3 - 1.2	(77/78)	1 - 3
9. OTHER LIQUEFICATION AND/OR GASIFICATION OF OIL SANDS, OIL SHALES OR COAL	.3 - 1	(77/78?)	0 - 3
10. HIGHER RECOVERY RATES FROM EXISTING OIL FIELDS	.3 - 1	(74/75)	1 - 2
11. GAS FROM ALASKA AND CANADIAN ARCTIC	0 - 1	(77/78)	0 - 2
12. MISCELLANEOUS (INCLUDING OTHER DISCOVERY AND EXPLOITATION OF PREVIOUSLY NON-ECONOMIC SOURCES; HIGH INEFFICIENT PRODUCTION RATES; IMPORTS OF COAL, GAS OR OIL FROM COMMUNIST COUNTRIES; SOME MORE "CHEATING" BY ARAB STATES; INCREASED USE OF NUCLEAR ENERGY; INCREASES OF NUCLEAR, SOLAR, ALCOHOLIC, OR WOOD SOURCES OF ENERGY; ETC.)	.3 - 2 5 -15	(74/78) (74/78)	1 - 3 12 -32

*ACTUALLY IN MANY CASES WE ARE ASSUMING WORLD-WIDE PROGRAMS TOUCHED OFF BY U.S. ACTIONS AND LEADERSHIP.

**.7-1.5 (74/75) IS DELIBERATELY IMPRECISE. IT DOES NOT NECESSARILY MEAN .7 BILLION BARRELS OF OIL EQUIVALENT IN 1974 AND 1.5 IN 1975 BUT COULD MEAN .7 OR 1.5 IN 1974 OR 1975. HOWEVER, IN ACCORD WITH OUR DELIBERATE IMPRECISENESS, THE FORMER IS NOT A BAD WAY TO READ MOST OF THE ENTRIES

TWO CHARACTERISTIC CURRENT VIEWS ON TECHNOLOGICAL AND ECONOMIC GROWTH

(A) Neo Malthusian Beliefs and Conclusions

1. **Fixed Pie:** We have a fairly good idea of what this world can provide. Therefore, "the finite pie" or "fixed bowl" are good metaphors, particularly in thinking about non-renewable or limited resources. We must share more fairly the limited supplies and room of "spaceship earth." Otherwise, even if the rich grow richer, the poor will grow poorer. Nor should we irresponsibly deny our grandchildren by using up or destroying the common patrimony of man.

BASIC MODEL

2. **Diminishing Returns:** New technology and additional capital investment, necessary to extract marginal resources, will vastly increase pollution, probably to lethal levels and markedly accelerate the approaching exhaustion of resources. In any case, we shall have to cope increasingly with diminishing marginal returns and utilities—increasingly facing situations in which the effort required for the returns gained increases dramatically.

MORE TECHNOLOGY AND MORE CAPITAL

3. **Likely Failure:** The rapidity of change, the growing complexity of problems, and increasing by conflicting interests will all make the effective management of resources, control of pollution, and resolution of other conflicts surprisingly difficult. Some sort of slowdown of change, simplification of issues, and centralized region-wide (or worldwide) decision making is imperative—even if this requires revolutionary or other drastic actions.

MANAGEMENT AND DECISION MAKING

4. **Rapid Depletion:** Man is rapidly depleting the earth's food, energy and mineral resources, and even running out of space for getting rid of pollution products. Many key resources will soon be seriously depleted. While most of these problems will not arise in catastrophic form until early in the next century, current pollution problems, food and energy shortages, and increasing shortages of materials and resources generally, are not only becoming critical now but are clearly precursors of more disastrous events in the medium- and long-term future.

RESOURCES

5. **Uncontrolled Exponential and/or Cancerous:** Even if the current level of population and production could be sustained indefinitely, current exponential growth in both (for example, gross world product doubles every 14 years, world population every 33) will accelerate dramatically the approaching exhaustion of resources and of our ability to cope with pollution —indeed unless stopped soon by drastic programs, it will make an early and catastrophic collision with resource limitations or pollution constraints inevitable.

CURRENT GROWTH

(B) Post-Industrial (and Super-Industrial) Perspective

1. **Growing Pie:** No one knows accurately what the earth holds or can produce—or what new uses may be made of new or old materials. But "growing pie", "expanding bowl", "exercised muscle" (or skill) are all good metaphors—i.e., within limits, the more one produces, the more one can produce. Furthermore, increases in productivity, wealth and affluence anywhere often create conditions that allow or encourage similar increases almost everywhere.

2. **Absolutely Necessary:** New technology and capital investment are necessary not only to increase production to desirable levels, but to help protect and improve the environment, to keep resource costs down, and to provide an economic surplus for problems and crises. In any case, if we are reasonably prudent and flexible we will not have to contend with any really serious shortages in the medium run and the long run looks even better. (*But we must be on alert for far-fetched and unlikely but potentially catastrophic events due to misunderstood innovations or inappropriate growth.)*

3. **Probable Success:** The systematic internalization of relevant external costs and the normal use of the price and other market mechanisms can deal with most issues. Some low but practical degree of public regulation and international cooperation can deal with most or all of the rest. *With some possible exceptions, the level of management required is not remarkably high,* particularly if the system normally learns from experience—even if slowly and painfully. (But good management can increase the speed and accuracy of reaction and reduce the pain.)

4. **Adequacy:** *Leaving aside for the moment some very specialized and/or far-fetched issues,* it would be possible to support, more or less satisfactorily (*at least by likely middle class standards)* world populations of 20 or 30 billion at levels of 20 or 30 thousand (1974) dollars per capita for centuries, indeed, we could do this largely using only current and near current technology. Given likely technological progress we should do much better. Further, it is exactly technological progress and large economic surpluses which make it likely that we can deal with these specialized and/or far-fetched issues if they arise.

5. **Eventually a Transition to Stability:** While such long run projections are inherently uncertain, one can make a plausible case for world population stabilizing in the 21st century at about 15 billion, GWP/cap at about $20,000 and GWP at about $300 trillion. Give or take factors of, say, two, three and four respectively. (In other words, population should be between 7 and 30 billion, GWP/cap between $5,000 and $60,000 and GWP between $50 and $1,000 trillion.)

Column (A) cont'd.

6. **A Trap:** New discoveries of resources, new technologies, and new projects may postpone the immediate need for drastic actions, but not for long. Such postponement will make the eventual collapse more severe and possibly even earlier. Prudence demands immediate restraint and cutbacks. There must be a basic change in values and objectives, the time for short run palliation is past.

INNOVATION AND DISCOVERY

7. **Gaps Increase:** Dangerous gaps in income (both domestic and international) are widening rapidly. A worldwide "class war" or a series of desperate political crisis is imminent. The likelihood of these tragedies occurring is heightened by increasing growth in the rich nations, particularly when these selfishly consume —even squander—the resources of the poor nations obtained at bargain prices.

INCOME GAPS AND POVERTY

8. **A Disaster:** Further industrialization of the third world would be disastrous, and further growth of the developed world worse. Therefore, the rich should halt their industrial growth and share their present wealth with the poor. Further, the poor nations should not sell their increasingly valuable resources so cheaply or so rapidly.

INDUSTRIAL DEVELOPMENT

9. **Growth Vs. Quality of Life:** Continued economic or population growth means further deterioration of environment, destruction (or ecology) (particularly of marshes and wilderness), overcrowding, suburban sprawl, and a society suitable for automobiles, trucks and planes but not for human beings. We must change our priorities. In particular, market demand is not the same as need; GNP is not wealth; high technology is not the same as the good life; automation and appliances do not necessarily increase human happiness.

QUALITY OF LIFE

10. **The Current Emergency is Total:** Unless revolutionary changes are soon made, the 21st century will see the greatest catastrophe since the black death. Large-scale damage is a plague to the environment and to the ecology of many areas. Billions will die of hunger, pollution and/or wars over shrinking resources. Other billions will have to be held down by harsh authoritarian governments. Indeed it may be better to have some die today than to have many die in the furture. The crisis is grave and some draconian measures may be justified now to alleviate the extent and intensity of the future collapse.

LONG RANGE OUTLOOK

Column (B) cont'd

6. **Huge Improvements:** New resources and technology and economic growth often produce new problems and crises but they can still be used to solve problems, improve efficiency and upgrade the quality of life to a permanently high plateau. Even more important they increase the toughness and flexibility of the economy and society thus giving us insurance against bad luck or incompetency.

7. **Poverty Decreases:** The next century will likely see worldwide abolition of most absolute poverty. However, some arithmetical gaps will probably increase until the middle or end of the century. Both the rich and the poor will get richer, but some will continue to be much richer than others. But it is exactly these growing gaps and improved technology which make it easy to accelerate economic development for the poor.

8. **Must Continue:** Industrialization of the third world will (and should) continue. It is foolish to imagine that the rich nations will voluntarily share to the extent of deprivation for the rich. And it probably is nonsense to believe that the poor will be strong enough in the foreseeable future to seize much of the wealth of the rich by force. Nor can they benefit greatly from resources left in the ground.

9. **Eventually A High Quality of Life for All:** If one does not *adequately* internalize *appropriate* external costs, growth can cause much unnecessary destruction of important values. But the key words are "adequate" and "appropriate" and by whose criteria. Much of what some elites or esoteric groups consider destructive, many others consider constructive. Once there is *adequate internalizing of appropriate external costs* (by the criteria of most members of society) the complaints may still be very shrill and visible but largely inappropriate or very specialized.

10. **Things Are Going Reasonably Well:** The 21st century is likely to see a post-industrial economy in which the more desperate and seemingly eternal problems of human poverty will have largely been solved or greatly alleviated. Most misery will derive from the anxieties and ambiguities of wealth and luxury, not from physical suffering due to scarcities. While doubtless many tragic mistakes and much suffering and damage will mark this historical transition to a materially abundant life for almost all, the ultimate prospect is breathtakingly superior to traditional poverty and scarcity. The post-industrial society and culture which will eventually accompany the post-industrial economy should be close to a humanistic utopia by most historic standards.

One's attitude toward the positions may determine his attitude toward many other things. Thus, a believer in column 1 would regard a man who "drops out" as doing God's work, and a project to improve productivity as a crime against humanity. Column 2 adherents would take the exact opposite view. Therefore, (we would like) the reader might wish to imagine that the above perspectives are being advanced as a basis for programs by two political parties and he is asked to choose between them, even if neither reflects his exact position.

A POSSIBLE SCENARIO FOR U.S. ENERGY INDEPENDENCE WHICH EMPHASIZES DOMESTIC PRODUCTION OF OIL[1]

Assume U.S. use of oil goes from 6.5 billion bbls/yr in 1974 to 8 in 1981 (3 percent growth/yr)[2] and then to 12 in 1990 (4.6 percent growth/yr)[2]. This implies U.S. will need 100 billion bbls in the period 1981-1990. Assume vigorous programs in all five of the areas listed below.

SOURCE	Proved Reserves[3] in 1981	Likely 1981 Production Capacity[4]
Tertiary Recovery of old fields	10-30	1-2
"Normal" 48[5]	10-30	2-3
All Alaskan Oil	40-150	1-3
Off Shore 48	10-50	1-2
O.C.S.	10-40	1-2
TOTAL	100-300[6]	6-10[7]

Notes:

[1] Based on estimates by U.S. Geologic Service, U.S. Navy, private sources, the imagination of Herman Kahn, and a self fulfilling prophecy.

[2] We assume a relatively slow growth when oil is scarce and high priced--a relatively fast growth once the price has dropped to about $5/bbl (in 1973 dollars).

[3] Billions of bbls.

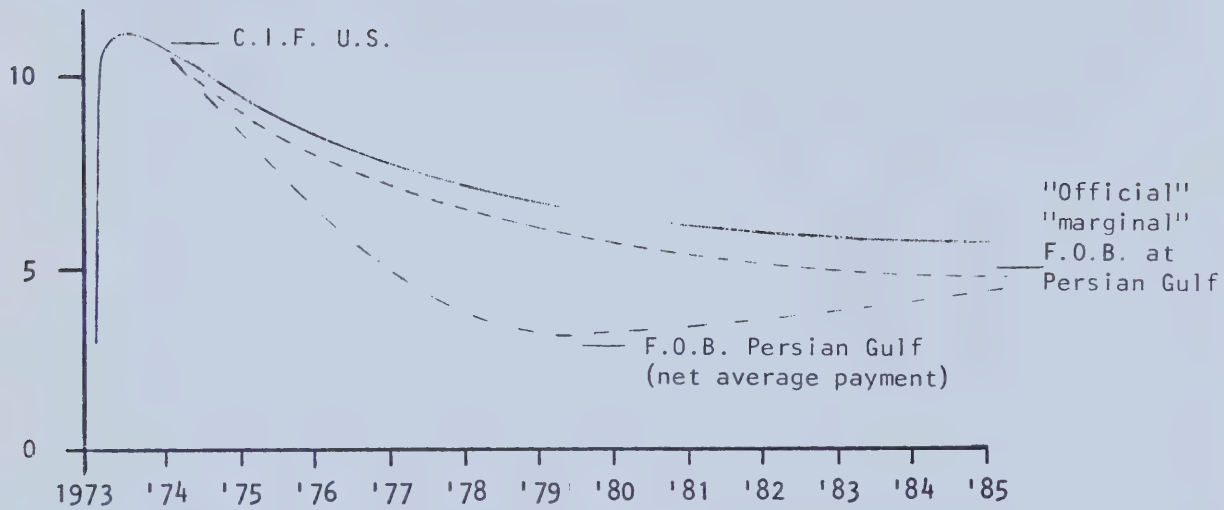
[4] Billions of bbls/yr.

[5] From wells drilled on land (or very close in) in the lower 48 states.

[6] We use 100 as the minimum instead of 90 because all five items will not be at the low-end, and 100 is a nice round number.

[7] 6billion bbls/yr would be about a 50 percent increase in current domestic production or a growth of 6 percent/yr; 10 billion bbls implies a domestic production 2.5 times today's (growth of 14 percent/yr). The reason for the "10" rather than "12" is that all the possibilities for actual production will not be pursued (as opposed to the possibility of pursuing all possibilities for proved reserves.)

A LIKELY C.I.F. (MARGINAL) PRICE/BBL OF TYPICAL CRUDE AT TYPICAL U.S. PORT*
(fixed 1973 dollars)



*Also "not-unlikely" projections for (realistic) marginal and average prices for a similar bbl F.O.B. Persian Gulf. The word "realistic" implies we are taking account of concealed discounts and concessionary financing.

WHY OPEC WILL PROBABLY NOT MAINTAIN HIGH OIL PRICES OVER MANY YEARS

I. THE PAST RECORD OF CARTELS IN GENERAL (AND OPEC IN PARTICULAR).

A. FIXED PRICES ARE DIFFICULT TO POLICE
B. QUOTAS ARE DIFFICULT TO AGREE ON
C. "CHEATING" IS TOO EASY AND TEMPTING AND LIKELY TO ESCALATE
D. OTHER REASONS FOR DIFFERENCES IN INTERESTS OR PRACTICES

II. OPEC'S CURRENT INTERNAL DIFFERENCES AND WEAK INTERNAL DISCIPLINE.

A. OPEC MEMBERS EXPECT QUOTAS AND PRICES TO MEET DIFFERING OBJECTIVES AND CIRCUMSTANCES:

1. SAUDI ARABIA: LARGE RESERVES--EMPHASIS ON LONG-TERM INCOME
2. KUWAIT: TRADITIONAL MARKET SHARE
3. IRAN: ECONOMIC DEVELOPMENT PRIORITY
4. IRAQ: NEED FOR DEVELOPMENT AND DEFENSE
5. NIGERIA: ENCOURAGE RATE OF DISCOVERY
6. INDONESIA: GOOD CUSTOMER RELATIONS AND INCREASE RATE OF EXPLORATION
7. LIBYA: FOREIGN POLICY PRIORITY

B. POSSIBLE EXTERNAL PRESSURES AND INDUCEMENTS

1. THE REST OF THE WORLD HAS:

a. TOO MUCH OIL
b. TOO MUCH COAL
c. TOO MUCH ENERGY IN GENERAL

2. COUNTERVAILING COALITIONS MAY ARISE
3. SPECIFIC PRESSURES, RETALIATIONS OR INDUCEMENTS MAY BE APPLIED
4. INCREASING LIKELIHOOD OF TECHNOLOGICAL BREAKTHROUGH AND NEAR CERTAINTY OF "LEARNING CURVES" AND COMMITMENT TO NON-OPEC SOURCES.

A VERY ROUGH ESTIMATE OF TOTAL PAYMENTS
FOR CRUDE OIL BY NON-OPEC
NATIONS TO CURRENT OPEC NATIONS
(in billions of 1974 dollars)

YEAR	LOW BUT TYPICAL ESTIMATE (Jan-Apr '74)		H.K. JAN. ESTIMATE	
	$	Factors+	$	Factors+
1974	100	11+ x 9+	90	11 x 8+
1975	110	12- x 10-	70	10+ x 7-
1976	120	12 x 10	60	11 x 5+
1977	130	13 x 10	(?)50	11 x 4.5(?)
1978	130	14 x 9+	(?)40	12 x 3.5-(?)
1979	130	15 x 9-	(?)40	13 x 3-(?)
1980	130	16 x 8+	(?)50	14 x 3.5-(?)
Total '74-'80	850		(?)400	
Financed by imports	300(?)		(?)150	
Other financing required '74-'80	550		(?)250	

+(Billions of barrels exported by OPEC) x (Average dollars received per barrel in 1973 dollars). The second factor includes the likely impact of concealed discounts, rebates and concessionary financing.

Note that by the end of 1977 the surplus for which financing other than imports may be required is likely, at least in theory, to be more than $300 and $150 billion respectively.

HUDSON STANDARD WORLD #1 AS OF APRIL 1974

The Basic Surprise-Free, Largely Business-as-Usual Projection for the Next Decade or Two

1. A **basic change** will occur in the character of the two fundamental curves of world population and gross world product over time. Both of these curves should pass through a point of inflection (actually the population curve may have already passed through this point), so that from then on, the metaphor of "exponential growth" will be increasingly misleading.

2. Barring bad luck or extreme mismanagement, the eleven years of 1975-1985 should see the **highest average rate of world economic growth in history,** perhaps six percent, though by the end of the period or soon thereafter, the downward slope of the upper half of the "S" shaped curve should begin to be felt. There should also be, at least for a while, an increasing emphasis on real and imagined problems such as worldwide inflation, international trade and monetary problems, commodity issues (including food, energy, and resources), and neo-Malthusian concerns. Later historians may describe this period by a number of different names or phrases, according to which aspect is emphasized:

A. **Une Belle Epoque**
B. The relatively full emergence of the **super-industrial economy**
C. A decade of **technological crises**
D. The **end of the postwar system** politically, economically, and financially
E. A **(troubled?) period of transition**
F. An **emerging post-industrial economy**
G. The continued **re-emergence of East Asia** (or of the Sinic Culture) on the world stage
H. **Nuclear proliferation(?)**

3. CULTURAL AND POLITICAL DISUNITY AND DIVERSITY. While there will be an increasingly unified world, both economically and politically, there will also be a number of major regional, political, economic or cultural divisions:

A. Usually, we think in terms of: 1) A westernized and industrialized capitalist area (basically OECD); 2) A European Communist area (basically the Warsaw Pact); 3) The Third World (and for the next few years perhaps a fourth world of about 900 million people who may suffer severely from high priced fuel, fertilizer and food)

B. Sometimes it is more convenient to think in terms of ten areas or so: 1) OECD; 2) Warsaw Pact; 3) A relatively isolated Indian cultural area (India, Bangladesh, Ceylon, Burma and Pakistan); 4) An even more isolated Communist Asia; 5) South East Asia; 6) Latin America; 7) Black Africa; 8) Middle East and North Africa; 9) "White" Africa; 10) The rest of the world

C. In considering "trading and investment areas" (or TIAs), we envisage six areas by about 1980: 1) Western Europe, North Africa, the Middle East, and Central Africa; 2) Pacific Basin (excluding the Soviet Union and China, but including Brazil); 3) Warsaw Pact; 4) Communist Asia; 5) Indian cultural area (not a TIA); 6) The rest of the world (also not a TIA)

D. In addition to regional or broad groupings, there are many important bilateral, trilateral, and higher groups of relationships, such as U.S.-U.S.S.R.-CPR or U.S.-EEC-Japan—many of them currently as important as intra-regional relationships in explaining world events

4. END OF POST WORLD WAR II POLITICS. An increasingly multipolar world politically which should bring in the next decade or two a steady, and nearly complete, erosion of post-World War II politics (e.g., Cold War; distinction between victors, losers, and neutrals; colonialism/decolonization issues; and so on)), with the following possible consequences and developments:

A. **Rise of Japan** as an economic, financial and technological superstate (and possibly a political or military superpower)

B. Almost full **re-emergence of both Germanys** (but with some critical political disabilities remaining for a long time)

C. Possible **emergence of France** as the largest national economy (at least in terms of nominal GNP) in Western Europe

D. Possible **Europe-wide security arrangements**

E. Some degree of settlement or **normalization of "national relations"** between the two sides of the four divided countries—Germany, Korea, Vietnam and China—but also the persistence of a high degree of separate national identity and a refusal to recognize such separation in permanent legal and moral terms

F. In effect, some **fifteen to twenty large nations** with the following GNP's in 1985 (in **billions** of 1973 dollars and with an estimated error of 20 percent)

$ 2,000	United States
1,000	Japan and U.S.S.R.
500	France and West Germany
250	China, Canada, Italy, United Kingdom
50 to 100	Germany, Poland, Netherlands, Sweden, Belgium, Australia, Argentina, Iran and Indonesia

G. An increasing feeling that **nuclear war**—and indeed even large conventional war—**is "unthinkable"** (except for divided countries, India/Pakistan, and Arab/Israeli situations—and even these may seem increasingly stable)

H. **U.S.-Soviet strategic equality**—or possibly even Soviet superiority —accompanied by a relative decline of both in power, prestige and influence
I. **An evolving EEC** (with perhaps a new role for France as the leading nation of the community)—also the possibility of a breakup of the current EEC
J. Possible creation of an **Eastern Europe EEC** or other arrangements to deal with "I" above
K. At least **ad hoc** creation and perhaps self-conscious advancement of a very dynamic (economically) **Pacific TIA**—perhaps similarly for a Western Europe-North Africa-Middle East-Central Africa TIA
L. Many **other new possibilities:** e.g., new alliances, new arms race, politically unified Europe, intensely isolationist U.S.; a deeply troubled U.S.S.R., etc.

5. **This Economic Ecumene** will set a context for further economic development of a unified but multipolar, partially competitive, mostly global economy.

A. A general understanding of the process and techniques for **sustained economic development**
B. **A worldwide "green revolution";** also a worldwide capability for modern industry and technology; but real difficulties in furnishing food, energy, and fertilizer to the poor at a **reliable low price**
C. Growing importance of **multinational corporations** as innovators of economic activity and engines of rapid growth
D. Some development of **Year 2000 ideologies**
E. **High (3-15%) GNP growth** almost everywhere—but especially in "the six dynamic areas" (Japan, Little Sinic Culture, Eastern Europe, Southern Europe, Brazil and Mexico, most OPEC countries)
F. Sustained **growth in trade, communications, travel**
G. **Increasing worldwide unity** in technology, private industry, commercial and financial institutions, but relatively little unity in international legal and political institutions
H. Increasing **problems of unemployment** in less developed countries **and labor shortages** in developed countries
I. Little or **no long-term overall catastrophes** with environment, pollution, or the scarcity of resources, though there will be many temporary crises and doubtless some limited catastrophes (particularly with respect to food)
J. A **renewed role for Gold** in the international monetary system—at least as a store of value—possibly more

6. Some acceleration, some continuation, and some selective topping off of the **multifold trend.** We would like especially to note:

A. With important exceptions, **erosion of "13 traditional societal levers"; a search for meaning and purpose,** some **cultural confusion, ideological polarization, social conflict, growth of discretionary behavior,** etc.
B. Increasingly **revisionist Communism, Capitalism** and **Christianity** in Europe and the Western hemisphere; a **crisis of liberalism**—some persistence and even a new eruption of the counterculture
C. **Populist, conservative, backlash, or "counterreformation"** movements
D. Increasing problem worldwide of **educated incapacity**—i.e., of illusioned, irrelevant, or ideological argumentation—and greater emphasis generally on feeling and emotion

7. **Various reactions to emerging "post-industrial" economies** in developed nations (with about 20 percent of world's population), and in enclaves elsewhere, among other things there should be:

A. **New political milieus:** the rise of a "humanist left"-"responsive center" confrontation in at least the high culture of developed nations (but particularly in the U.S. and Northwest tier of Europe)
B. Emergence of **"mosaic cultures"** (at least in U.S.) incorporating esoteric, deviant, communal and experimental lifestyles. Some increase in anarchistic behavior and movements—ideological and political development of the counterculture
C. Possible **successful synthesis** between old and new in France, Japan, Scandinavia, Northwest tier, Japan or elsewhere

8. Thus a relatively anarchic but also relatively orderly and unified world, but with new issues of international control:

A. Continuing growth in **discretionary behavior;** corresponding worldwide (foreign and domestic) **"law and order" issues.** Some growth in violent, deviant, or criminal behavior—possible unconventional use of terror, violence, subversion, unilateral changes of international rules
B. Some **bizarre uses of violence** may arise
C. Some **bizarre and ad hoc counter-measures** may be taken

9. **Some important but non-significant surprises** and perhaps some significant ones as well.

JAPAN IN 1985: THE WORLD'S SECOND TRILLION DOLLAR ECONOMY

Side A

(1) FIFTEEN REASON FOR THE LIKELY CONTINUED GROWTH OF JAPANESE ECONOMY

1. CURRENT SHIFTING OF ECONOMIC FOCUS TO INFRASTRUCTURE AND QUALITY OF LIFE PROVIDES MARKET GROWTH AND MORALE
2. HIGH LEVEL OF EDUCATION AND TRAINING
3. HIGH SAVING AND INVESTMENT RATES
4. "ADEQUATE CAPITALIZATION"
5. "RISK CAPITAL" READILY AVAILABLE
6. TECHNOLOGICAL CAPABILITIES COMPETITIVE TO WEST
7. STILL ECONOMICALLY AND PATRIOTICALLY MOTIVATED
8. HIGH MORALE AND COMMITMENT TO ECONOMIC GROWTH
9. WILLINGNESS TO MAKE NECESSARY ADJUSTMENTS
10. EXCELLENT MANAGEMENT
11. ADEQUATE ACCESS TO RESOURCE AND MARKETS
12. RELATIVELY WEAK (BUT GROWING) PRESSURES TO DIVERT EXCESSIVE RESOURCES FROM GROWTH
13. RECENT EMPHASIS ON R & D
14. ADEQUATE OPPORTUNITY FOR INVESTMENT AND EXPLOITATION OF EXTERNAL LABOR IN PACIFIC TRADE AND INVESTMENT AREA
15. FUTURE DEVELOPMENTS SEEM LIKELY, ON BALANCE, TO BE FAVORABLE

(2) FACTORS OFTEN SAID TO FAVOR "TOPPING OUT" OR EVEN DOWNTURN IN JAPANESE GROWTH

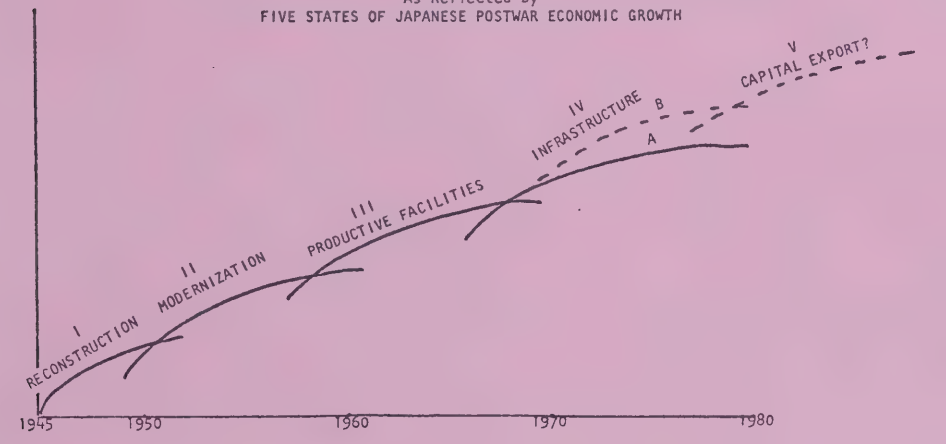
- .RESOURCE SCARCITIES
- .SERIOUS FOREIGN OPPOSITIONS
- .CREAM HAS BEEN SKIMMED OFF EUROPEAN AND U.S. TECHNOLOGY
- .SIZE OF JAPANESE WORK FORCE NO LONGER INCREASING RAPIDLY
- .LAGGING INFRASTRUCTURE
- .GREATER DEFENSE EXPENDITURE
- .HEDONISTIC TENDENCIES OF YOUNGER GENERATION
- .YOUNG RESENT SYSTEM IN GENERAL AND IN PARTICULAR "ESCALATOR" SYSTEM
- .DOMESTIC DEMANDS FOR "AMENITIES" AND SOCIAL INVESTMENT AND EXPENDITURE
- .LIKELY DIFFICULTIES WITH FOREIGN TRADE
- .ECONOMY MAY BECOME OVERHEATED BY EXCESSIVE EQUIPMENT INVESTMENTS, WHICH MIGHT EVENTUALLY LEAD TO OVERSUPPLY WHEN THE EXPANSION OF EXPORTS LEVELS OFF
- .REDUCTION IN BARRIERS TO AMERICAN AND OTHER FOREIGN INVESTMENTS WILL INTRODUCE NEW MANAGERIAL TECHNIQUES THAT WILL CREATE PRESSURES ON JAPANESE VERTICAL ORGANIZATIONS
- .JAPAN IS BECOMING A SERVICE ECONOMY--SOON WILL BE POST-INDUSTRIAL
- .SERIOUS POLITICAL STRAINS WITHIN THE EXISTING SYSTEM

(3) BUT SUCH FACTORS SEEM LARGELY TO BE:

1. OVERSTATED
2. ASSUMED TO HAVE TOO GREAT EFFECTIVENESS AND/OR
3. ASSUMED TO AFFECT GROWTH RATES TOO RAPIDLY--IF THEY DO SO AT ALL IT WILL TAKE TIME
4. SUBJECT TO COUNTERACTION--OR AT LEAST LIMITED THROUGH PROPER POLICIES AND/OR LIKELY EVENTS
5. POTENTIALLY--AT LEAST IN SOME CASES AND TO SOME EXTENT--MORE POSITIVE THAN NEGATIVE IN ULTIMATE EFFECT

(4) "CREATIVE DESTRUCTION"

As Reflected By
FIVE STATES OF JAPANESE POSTWAR ECONOMIC GROWTH



I	II	III	IV	V
RECONSTRUCTION	MODERNIZATION OF ECONOMY & SOCIETY LABOR INTENSIVE EXPORTS KOREAN WAR URBANIZATION AGRICULTURE	HIGHLY PRODUCTIVE FACILITIES CONSUMER DURABLES MEDIUM & HIGH TECHNOLOGY EXPORTS	INFRASTRUCTURE AND ENVIRONMENT VERY HIGH TECHNOLOGY AFFLUENCE CAPITAL ACCUMULATION	CAPITAL EXPORT? POST-INDUSTRIAL SOCIETY

(5) THREE SURPRISE-FREE SCENARIOS FOR JAPANESE GROWTH

CHARACTERIZATION	% REAL GROWTH RATE DURING 1974-80	1980'S	1990'S	GNP (TRILLIONS OF 1973 DOLLARS*) 1980	1985	1990	2000
HIGH	9	8	7	.73	1.1	1.6	3.1
MEDIUM	7.5	7	6	.66	.93	1.3	2.4
LOW	6.5	6	5	.62	.83	1.1	1.8

*GIVEN 1973 GNP = $400 BILLION

(6) A HEURISTIC PICTURE OF THE 1972-1985 JAPANESE ECONOMY (GNP GOES FROM $300B/YR TO $1,000B/YR IN U.S. 1972 DOLLARS)

ALLOCATION OF GNP	PERCENT		AMOUNT		PER CAPITA	
	1972	1985	1972	1985	1972	1985
PRIVATE CONSUMPTION	53	45	160	450	1,520	3,810
GOVERNMENT CONSUMPTION	10	17	30	170	290	1,440
HIGH OUTPUT (C.O.R.=3) USES	20	15	60	150	570	1,270
MEDIUM OUTPUT (C.O.R.=5) USES	17	20	50	210	480	1,780
NET LONG TERM CAPITAL EXPORTED (C.O.R.=10)	<1	3	~1	20	10	169

GNP CAPACITY GROWTH: 1972 - 10.1% 1985 - 9.3%

C.O.R. = CAPITAL OUTPUT RATIO = $ INVESTMENT TO INCREASE GNP CAPACITY BY $1

$$\frac{\%\text{ OF GNP (MEDIUM OUTPUT)}}{\text{C.O.R. MEDIUM}} + \frac{\%\text{ OF GNP (HIGH OUTPUT)}}{\text{C.O.R. HIGH}} = \text{GROWTH IN ECONOMY'S CAPACITY}$$

JAPAN IN 1985: THE WORLD'S SECOND TRILLION DOLLAR ECONOMY (CONT'D)

Side B

THREE CONSISTENT (INDEED MUTUALLY DEPENDENT) POLICIES AND PERSPECTIVES FOR JAPAN: 1973-1985

A. PUTTING HIGH PRIORITY ON INFRASTRUCTURE, ENVIRONMENT, AND OTHER ASPECTS OF A HIGH QUALITY OF LIFE--AND ON MAKING A MORE POSITIVE INTERNATIONAL CONTRIBUTION AS WELL (INCLUDING IMPACT ON INTERNATIONAL LIQUIDITY.)

B. STIMULATING AND SUSTAINING AN AVERAGE ECONOMIC GROWTH RATE OF ABOUT 10 PERCENT/YEAR FOR THE NEXT 13 YEARS TO ATTAIN A GNP OF ABOUT (OR MORE THAN) A TRILLION (1972) DOLLARS IN 1985.

C. ALLOCATING MORE THAN A TRILLION DOLLARS (OVER AND ABOVE CURRENT SPENDING) FROM 1973-1985 TO IMPROVING THE QUALITY OF LIFE IN JAPAN AND TO GREATLY ACCELERATING GROWTH IN MANY LDC'S.

BASIC ISSUES EXPLICITLY ADDRESSED BY PLAN

1. MODERN URBAN AND ENVIRONMENTAL PROBLEMS.
2. MALDISTRIBUTION OF POPULATION AND INDUSTRY IN GENERAL.
3. SHORT-TERM STRUCTURAL AND INTERNATIONAL PROBLEMS.

LESS CLEARLY ADDRESSED BUT CLEARLY IMPLICIT

1. MALDISTRIBUTION OF VARIOUS SPECIAL GROUPS, ACTIVITIES, AND FUNCTIONS.
2. HARMONY BETWEEN MAN AND NATURE.
3. MEANING AND PURPOSE.
4. HUMANISTIC POST-INDUSTRIAL CULTURE IN GENERAL.
5. MORE ATTENTION TO HUMAN VALUES AND TO RELATIVELY LUXURIOUS AND ATTRACTIVE CRITERIA.
6. INTERNATIONAL ISSUES.

LAND PRICES

1. ALTERNATIVE SITES AND CHOICES.
2. DECENTRALIZATION.
3. ADEQUATE TRANSPORTATION AND ACCESS.
4. APPROPRIATE TAXATION ON HOLDING AND ON SALE.
5. PREEMPTIVE BUYING AND INTELLIGENT BUYING-- SOME TEMPORARY CHANGES IN CONDEMNATION PROCEDURES.

FORECAST OF GNP, INDUSTRIAL PRODUCTION & COMMODITY PRICES

(IN BILLIONS OF YEN; %)

	FY 1972 ACTUAL	FY 1973 ACTUAL	FY 1974 ACTUAL
PERSONAL CONSUMPTION EXPENDITURES.....	49,076	61,389	78,347
	(15.6)	(25.1)	(27.6)
GOVERNMENT'S CURRENT PURCHASES OF GOODS & SERVICES.....	8,532	10,432	13,220
	(19.7)	(22.3)	(26.7)
PRIVATE HOUSING.....	7,020	9,657	12,214
	(34.6)	(37.6)	(26.5)
PRIVATE PLANT & EQUIPMENT EXPENDITURES..	17,035	22,501	27,873
	(14.2)	(32.1)	(23.9)
PRIVATE INVENTORY INVESTMENT.....	2,315	4,350	3,433
	(29.1)	(87.9)	(▲21.1)
GOV'T FIXED CAPITAL FORMATION.....	9,643	11,292	13,867
	(25.4)	(17.1)	(22.8)
EXPORTS ETC.	10,729	13,175	19,175
	(7.3)	(22.8)	(45.5)
IMPORTS ETC.	8,786	13,854	18,671
	(13.2)	(57.7)	(34.8)
GROSS NATIONAL EXPENDITURES.....	95,564	118,942	149,458
	(17.3)	(24.5)	(25.7)
REAL GROSS NATIONAL EXPENDITURES (IN 1965 PRICES)...	67,923	73,731	76,956
	(11.0)	(8.6)	(4.4)
WHOLESALE PRICE INDEX (1970=100).....	102.3	125.3	157.7
	(3.2)	(22.5)	(25.9)
CONSUMER PRICE INDEX (1970=100: NATIONAL)	112.8	130.9	160.1
	(5.2)	(16.0)	(22.3)
MINING-MFG. PRODUCTION INDEX (1970=100)...	114.6	131.8	138.6
	(10.9)	(15.0)	(5.2)

NOTE: SEASONALLY ADJUSTED ANNUAL RATES FOR QUARTERLY FIGURES. FIGURES IN PARANTHESES SHOW PER CENT INCREASE (▲ DECREASE) FROM PREVIOUS YEAR OR QUARTER. LOWER PARANTHESES FOR GROSS NATIONAL EXPENDITURES, MINING-MANUFACTURING PRODUCTION INDEX, WHOLESALE PRICE INDEX AND CONSUMER PRICE INDEX SHOW PERCENTAGE CHANGES FROM THE CORRESPONDONG PERIOD OF THE PRECEDING YEAR.

JAPAN ECONOMIC RESEARCH CENTER, MARCH 19, 1974

JAPAN'S LARGEST WAGE INCREASE EVER

WAGE INCREASES WON BY SPRING LABOR OFFENSIVES
(% AVERAGE FOR PRIVATE INDUSTRIES)

1960-64	10.9
1965-69	12.4
1970	18.3
1971	16.6
1972	15.0
1973	19.8
1974	31.4*

IT IS ESTIMATED THAT THE INCREASE OF 31.4% REPRESENTS ABOUT $95/MONTH. IT APPEARS THAT THE MAJOR REASON FOR SUCH A LARGE INCREASE IS THE FIRST QUARTER DECLINE IN REAL WAGES, VIZ:

4% DECLINE IN JANUARY
5.9% DECLINE IN FEBRUARY
5.5% DECLINE IN MARCH

THIS IS THE FIRST CONSECUTIVE THREE MONTH DECLINE IN 17 YEARS

NIKKEIREN SURVEY, APRIL 30, 1974

POSSIBLE COSTS OF PURSUING TANAKA PLAN

1. INFLATIONARY PRESSURES
2. INCOMPLETE CONSENSUS--PARTICULARLY ON DETAILS
3. INCOMPLETE PLANNING--POSSIBLE PREMATURE COMMITMENTS
4. OTHER TECHNICAL MISTAKES AND INEFFICIENCIES LIKELY
5. MAY CREATE OR SUSTAIN OVEREMPHASIS ON GROWTH
   A. VERSUS SOCIAL WELFARE AND CURRENT CONSUMPTION
   B. VERSUS ALL THE OTHER REASONS FOR BEING AGAINST GROWTH
6. MAY DEFER UNNECESSARILY THE BASIC NATIONAL AND PERSONAL DEBATE ON "MEANING AND PURPOSE"

RAPID IMPLEMENTATION WOULD PROBABLY INVOLVE:

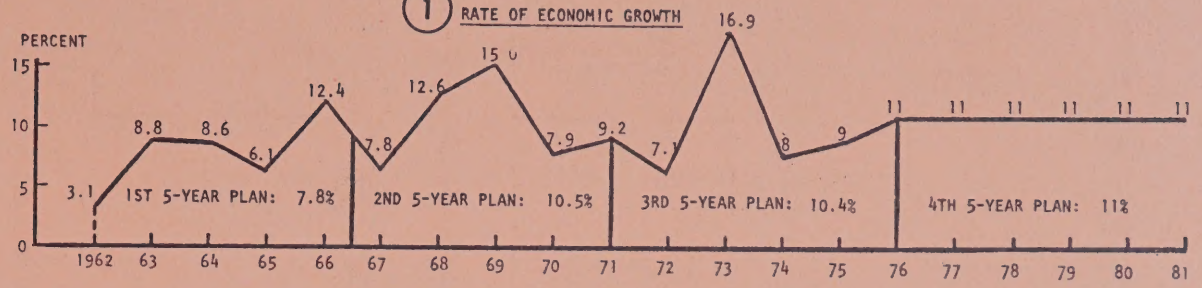
1. DE-EMPHASIS ON CONSENSUS AND PRUDENCE - OTHER SPECIAL PLANNING AND IMPLEMENTATION
2. INDEED HEROIC AND NOVEL APPROACHES, MUCH IMPROVISATION, MUDDLING THROUGH, AND INSPIRED "RISING TO THE OCCASION"
3. EARLY PREPARATION FOR ALLEVIATING OTHER BOTTLENECKS
4. EMPHASIS ON ROADS, RAILROADS, HOUSING, SITE PREPARATION, SCHOOLS, PUBLIC BUILDINGS, ETC.
5. DEFICIT FINANCING AND ISSUANCE OF BONDS
6. VARIOUS METHODS OF DECREASING INFLATIONARY PRESSURES
7. SPECIAL ATTENTION TO THE PROBLEM OF SUPPLYING LABOUR FOR CONSTRUCTION AT REASONABLE RATES (SEE CHART 4)

Hudson Institute
6174

KOREA: AN EMERGING INDUSTRIAL STATE

Side A

1 RATE OF ECONOMIC GROWTH



2 PROJECTED ECONOMIC GROWTH

	1973	GROWTH RATE (%)	1976	GROWTH RATE (%)	1981	GROWTH RATE (%)	1985
GNP (BILLION 1973 $)	12.3	9.0	15.9	11.0	26.8	9.5	38.5
POP (MILLIONS)	32.9	1.5	34.4	1.3	36.7	1.2	38.5
GNP/CAP ($)	373		462		730		1000
IMPORTS 1974	$6.2 BILLION (ESTIMATE)						
EXPORTS 1974	$5.0 BILLION (ESTIMATE)						

3 INVESTMENT REQUIREMENTS (1973-1981)

TOTAL CAPITAL $42.2 BILLION

ALLOCATION

	$ BILLIONS	PERCENT
MINING & MANUFACTURING	15.4	(36.5)
(HEAVY & CHEM.)	(9.6)	(22.7)
AGRICULTURE, FORESTRY & FISHING	4.3	(10.1)
SOCIAL OVERHEAD & SERVICES (EXPRESSED IN 1970 U.S.$)	22.5	(53.4)

MOBILIZATION

GOVERNMENT	22.6
PRIVATE	66.7
DOMESTIC SAVINGS	89.3
FOREIGN SAVINGS	10.7

RATIO OF TOTAL INVESTMENT TO GNP

1972	1976	1981
20.9	24.5	27.1

4 PROJECTIONS ON FINANCING OF INVESTMENT IN HEAVY AND CHEMICAL INDUSTRIES, 1973-81

(IN MILLIONS OF CURRENT U.S. DOLLARS)

	FOREIGN CAPITAL	DOMESTIC SAVING	TOTAL
IRON AND STEEL	1,502	674	2,176
NON-FERROUS METAL	222	123	343
MACHINERY	1,049	1,137	2,186
SHIPBUILDING	416	352	768
ELECTRONICS	593	599	1,192
CHEMICAL	1,523	662	2,185
SUB-TOTAL	5,305 (59.9)	3,547 (40.1)	8,852 (100.0)
OTHER	468	273	741
GRAND TOTAL	5,773 (60.2)	3,820 (39.8)	9,593 (100.0)

NOTE: FIGURES IN PARENTHESIS SHOW PERCENTAGES

DAI-HAN KUM YOONG DAN (KOREA BANKING ASSOCIATION), KUM-YOONG, OCTOBER, 1973, 0. 30.

5 FOUR GENERAL REASONS FOR EXPECTING CONTINUED OR EVEN INCREASED RATES OF ECONOMIC GROWTH

1. PROXIMITY TO AND SPECIAL RELATIONSHIPS WITH A "BOOMING" JAPAN AND GROWING U.S.
2. GOVERNMENT CAPABILITY TO PLAN AND IMPLEMENT PROGRAMS
3. MOTIVATION AND CAPABILITY OF PEOPLE
4. EXPECTATION OF CONTINUED ERA OF PEACE AND PROSPERITY WITH HIGH GROWTH RATE, I.E., EMERGENCE OF SUPER-INDUSTRIAL ECONOMY WORLDWIDE

6 SOME REASONS FOR EXPECTING AN ECONOMIC SLOWDOWN OR DIFFICULTIES OF ACHIEVING GOALS OF TEN-YEAR PROGRAM

1. INSUFFICIENT CAPITAL
2. DOMESTIC INFLATIONARY PRESSURES
3. WORLD INFLATIONARY PRESSURES
4. SHORTAGE OF TECHNICIANS AND SKILLED WORKERS AND SURPLUS OF UNSKILLED WORKERS, FARMERS, AND RAPIDLY INCREASING POPULATION
5. INADEQUATE SUPPORTING INDUSTRIES UNSKILLED FOR HIGHLY COMPLICATED INDUSTRIES, E.G., SHIPPING, STEEL
6. INADEQUATE MARKET AND PERHAPS INADEQUATE INTERNATIONAL MARKETING CAPABILITY
7. LACK OF RESOURCES
8. REAL OR POSSIBLE POLITICAL ISSUES
9. INTERNATIONAL POLITICAL PRESSURES--E.G., U.N. ISSUES
10. CORRUPTION PROBLEM

KOREA: AN EMERGING INDUSTRIAL STATE

Side B

(1) SOME SPECIAL, PERHAPS OVERLOOKED OR UNDERESTIMATED POSSIBILITIES THAT MAY BECOME INCREASINGLY IMPORTANT DURING THE 1970'S

1. POSSIBILITY OF VERY RAPID GROWTH OF TOURISM TO 20 MILLION OR MORE WITH ANNUAL INCOME OF 3 OR 4 BILLION DOLLARS BY EARLY 1980'S

2. OTHERS

   A. LARGE SCALE OVERSEAS EMPLOYMENT PROGRAM AS A MAJOR SOURCE OF FOREIGN EXCHANGE AS WELL AS TECHNICAL TRAINING AND DEVELOPMENT
   B. "KOREA BOOM"
   C. "PACIFIC BASIN BOOM"--SINICULTURE IN PARTICULAR BECOME "IN" PLACE TO INVEST DRAWING MUCH LARGER PROPORTIONS OF U.S. AND EUROPEAN CAPITAL. "LEARNING CURVES" OF MANY CORPORATIONS, AS WELL AS GIGANTIC INCREASES IN FOREIGN INVESTMENT WORLD-WIDE AS WE ENTER "SUPER-INDUSTRIAL" ERA, NOW MAKING THIS POSSIBLE
   D. IMPORTANCE OF INDUSTRIAL PARKS AS A FOCUS OF ECONOMIC DEVELOPMENT
   E. SPECIAL SYNERGISTIC TRI-LATERAL RELATIONSHIP WITH JAPAN AND U.S. AND EMERGENCE OF "JAPAN-EASTERN SEA AGE"
   F. IMPORTANCE OF SMALL AND MEDIUM SIZED INDUSTRIES AND NEW GROWTH AREAS
   G. IMPORTANCE OF ROLE OF INTERNATIONAL BUSINESS (TRADING COMPANIES, OVERSEAS CONTRACTS, KOTRA)

(2) A GROWTH IDEOLOGY FOR KOREA

1. THE BASIC IDEA IS TO PUT THE ENTIRE DEVELOPMENT PROCESS IN PERSPECTIVE. SHOW HOW KOREA CAN GO FROM PRE-INDUSTRIAL TO POST-INDUSTRIAL IN 50 TO 70 YEARS. CREATE AN IMAGE OF WHAT KOREA WOULD BE LIKE IN 50 YEARS AND WHAT IS REQUIRED TO GET THERE

2. ONE SCENARIO WOULD BE AS FOLLOWS:

   A. EXPLANATION OF HIGH GROWTH RATES IN 1960'S AND BENEFITS THESE BROUGHT IN

   B. PROGRAM FOR 11 PERCENT GROWTH RATES IN 1970'S AND WHAT THIS WILL BRING BY 1981 (E.G., WHAT A PER CAPITA INCOME OF $600/$1,000 WILL MEAN FOR THE AVERAGE INDIVIDUAL)

   C. GRADUALLY DECLINING GROWTH RATES FROM 1980 TO 2000, PERHAPS 8 PERCENT AVERAGE, AS GREATER FOCUS IS PLACED ON POLLUTION CONTROL AND QUALITY OF LIFE. BY THE YEAR 2000 KOREA WILL BE A CONSUMPTION AND WELFARE-ORIENTED SOCIETY. ABOUT $3,000 PER CAP, ROUGHLY EQUAL TO WESTERN EUROPE TODAY

   D. GRADUALLY DECLINING GROWTH RATES TO 2025, PERHAPS 6 PERCENT AVERAGE, FOCUS ON CHANGING FROM ECONOMIC GROWTH TO POST-INDUSTRIAL ISSUES. BY 2025 GNP/CAP IS $6,000/$8,000 AND GNP ABOUT THAT OF JAPAN TODAY

3. IT MIGHT INCLUDE THE FOLLOWING POINTS:

   A. INDUSTRIALIZATION IS A RECENT AND TEMPORARY PHENOMENON. KOREA IS ALREADY RICH BY HISTORICAL STANDARDS. NO PRE-INDUSTRIAL ECONOMY EVER WENT MUCH ABOVE $200 PER CAPITA. CHILDREN TODAY WILL SEE THE END OF THIS PROCESS--A FABULOUSLY WEALTHY NATION WITH THE MEANS AND LEISURE TO TURN TO NEW GOALS AND NEW OR OLD VALUES WITH OPTIONS UNDREAMED OF BY THEIR ANCESTORS

   B. GROWTH IS NOT FOR FREE. IT REQUIRES HARD WORK, SACRIFICE, HIGH SAVINGS NOW, NATIONAL COMMITMENT. IT IS NOT ALWAYS FAIR--DISTRIBUTION OF WEALTH IS UNEVEN. SOME PROBLEMS LIKE POLLUTION AND URBAN CONGESTION WILL GET WORSE BEFORE THEY GET BETTER. BUT PROGRESS AND IMPROVED LIVING STANDARDS ARE MEASURABLE AND CHECKABLE THROUGHOUT

4. THE IDEOLOGY MUST BE PERSUASIVE BUT NOT NECESSARILY EXACT. LIKE COMMUNISM, ITS FIRST REQUIREMENT IS TO PROVIDE A CREDIBLE PICTURE OF WHAT WILL HAPPEN

5. THE GOVERNMENT MUST TAKE IT SERIOUSLY AND BE TAKEN SERIOUSLY. PROBLEMS MUST BE STATED AS OPENLY AND HONESTLY AS ADVANTAGES

(3) POSSIBILITY OF KOREA BEING A MODEL FOR DEVELOPING NATIONS

1. KOREA HAS BEEN ONE OF THE WORLDS FASTEST GROWING ECONOMIES FOR LAST 10 YEARS

2. KOREA IS FAIRLY TYPICAL--NON-WESTERN, A FORMER COLONY, MODERATE SIZE AND POPULATION, TRADITIONAL AGRARIAN ECONOMY, QUASI-DEMOCRATIC GOVERNMENT WITH MILITARY RULE AND CIVILIAN BUREAUCRATIC MANAGEMENT

3. ITS A-TYPICAL ASPECTS ARE ALMOST ALL MINUSES--HIGH POPULATING DENSITY, LACK OF RESOURCES, COLD CLIMATE, RELATIVELY POOR AGRICULTURAL LAND, DIVIDED COUNTRY FAIRLY RECENTLY DEVASTATED BY WAR, LARGE MILITARY BURDENS. IF KOREA DOES WELL DESPITE THESE, IT IS PARTICULARLY IMPRESSIVE

4. KOREA'S EXCEPTIONALLY WELL EDUCATED, TALENTED, HARD-WORKING LABOR FORCE EMPHASIZES IMPORTANCE OF HARD WORK IN DEVELOPMENT PROCESS

5. OLD MODELS--ENGLAND, U.S., JAPAN, RUSSIA--NO LONGER RELEVANT. MEANS AND MOTIVES FOR DEVELOPMENT HAVE CHANGED

(4) KOREA - EXPORTS (MILLIONS OF CURRENT U.S.$)

YEAR	A. TOTAL	ANNUAL GROWTH (%)	B. U.S. & JAPAN	C. B AS % OF A
1958	16.7		12.7	76.1
1959	19.2	+14.8	14.9	77.6
1960	31.7	+65.1	23.9	75.4
1961	38.1	+20.2	26.3	69.0
1962	54.9	+44.1	35.6	64.9
1963	86.6	+57.7	49.1	56.7
1964	119.5	+38.0	73.8	61.8
1965	175.1	+46.5	105.7	60.4
1966	249.7	+42.6	161.3	64.6
1967	320.2	+28.2	222.1	69.4
1968	455.7	+42.3	335.1	73.5
1969	625.0	+37.2	445.6	71.3
1970	835.3	+33.7	624.3	74.7
1971	1067.7	+27.8	793.8	74.4
1972	1628.7	+52.5	1171.3*	71.9
1973	3254.2	+99.8	2282.9*	70.2

*DERIVED FROM IMPORTING COUNTRIES' DATA

(5) INDUSTRIAL PARK METHOD OF DEVELOPMENT PERMITS:

1. ACQUISITION OF LAND AT LOW AND STABLE PRICES
2. EFFICIENT USE AND DEVELOPMENT OF LAND, INFRASTRUCTURE--ROADS, RAILROADS, PORTS, POWER, WATER, HOUSING, TECHNICAL SCHOOLS, ETC.
3. POLLUTION CONFINEMENT AND/OR CONTROL
4. EFFICIENT LOCATION OF COMPLEMENTARY INDUSTRIES
5. WORKERS TO LIVE AT HOME
6. REDUCES PRESSURES TO MIGRATE TO URBAN CENTERS
7. EFFECTIVE ADMINISTRATION AND GENERAL PLANNING, REDUCTION OF REGULATIONS
8. ALTERNATIVE INDUCEMENTS FOR FOREIGN INVESTMENT
9. CONVENIENT RAPID INVESTMENT POSSIBILITIES
10. CONVENIENT SERVICES FOR FOREIGN INVESTMENT, INFRASTRUCTURE, MARKETING

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